

Quality Improvement Workstation on the World Wide Web

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Background: The emergence of managed health care has increased the need for efficient clinical practice patterns. Improving practitioners' access to recommendations abstracted from clinical practice guidelines, to the related substantiating evidence, and to the latest scientific information will help achieve this goal.^{1,2} New software and network solutions offer great promise because they remove the barriers of time and place and allow stakeholders of quality such as physicians and quality control teams to easily access resources and services that can be applied to care management.

Objective: To create a quality improvement workstation that will be a one-stop information access tool for those involved in improving the health care quality.

System: We have designed a quality improvement workstation on the World Wide Web that provides interactive, efficient, and easy-to-use information access services. The key components of the system include a web browser, the MEDLINE database of medical literature at the National Library of Medicine, and an information server that provides access to the medical resources. Other resources such as the interventions, educational seminars, and links to CQI web sites and newsgroups are also available on the workstation. The workstation also provides a slide show on quality control, available free of charge to users who wish to include it in their presentations.

In addition to the interactive services, the website provides clinical practice parameters and the UMLS metathesaurus to map the clinical concepts to search

studies in indexed literature. Structured search templates, which allow a user to combine the clinical subject with the type of evidence desired, are available for formulating the final MEDLINE search strategy.

The literature search service, which uses concepts and clauses embedded in the text of a parameter, is currently available for practice parameters related to diabetes, preventive care and asthma. Users can submit new parameters to be reviewed and added to the existing ones.

Conclusions: The number of Internet medical sites and the information in them are increasing constantly. The web workstation can expedite the provision of quality health care by allowing efficient retrieval and delivery of quality improvement information.

Acknowledgments

This work was supported by the National Library of Medicine grants 5 T15 LM07089-05 and 467-MZ-562172.

References

1. Haines A, Jones R. Implementing findings of research. *BMJ* 1994;308(6942):1488-92.
2. Soumerai SB, McLaughlin TJ, Avorn J. Improving drug prescribing in primary care: a critical analysis of the experimental literature. *Milbank Q* 1989;67:268-317.